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[Continued on next page]

(54) Title: POLYPEPTIDE PARTICIPATING IN PYRIDOXINE BIOSYNTHESIS, A POLYNUCLEOTIDE CODING THE POLYPEPTIDE AND THOSE USES

At5g10410 -----MEG--TGVVAVYNGAITEAK-XSPFSVKVGLAQMLRGGVIMDVVNAEQARIAEE 52
At2g38230 -----MAG--TGVVAVYGEAGTETKQKSPFSVKVGLAQMLRGGVIMDVVNAEQARIAEE 53
At3g16050 MADQAMTDQDQGAUTLYSGTAITDAKXHPFSVKVGLAQMLRGGVIMDVVNAEQARIAEE 60
snz3 -----MS-----EFKVKTLGLAQMLKGGVIMDVVTPAQIAIAER 33
snz2 -----MS-----EFKVKTLGLAQMLKGGVIMDVVTPAQIAIAER 33
snz1 -----MTG-----EDFKIKSGLAQMLKGGVIMDVVTPAQIAIAEK 35
* * * * *

At5g10410 AGACAVMALERVFPADIRAQGGVARMSPDPMIKEIKNAVITIPVMAKARIGHFVEAQILEAI 112
At2g38230 AGACAVMALERVFPADIRAQGGVARMSPDPMIKEIKNAVITIPVMAKARIGHFVEAQILEAI 113
At3g16050 AGACSVIYSD---PVRSGGVRRMPDPVLIEKVRKAVSPVMAKARIGHFVEAQILEAI 116
snz3 AGACAVMALERIPADMRKSGGVCRMSDPRMIKEIMEAVSIPVMAKVRIGHFVEAQILEEL 93
snz2 AGACAVMALERIPADMRKSGGVCRMSDPRMIKEIMEAVSIPVMAKVRIGHFVEAQILEEL 95
snz1 SGACAVMALESIPADMRKSGGVCRMSDPMIKNIMNSVSIIPVMAKVRIGHFVEAQILEAL 95
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At5g10410 GIDVIDESEVLTLADEDHINKHNFRIFFVCGCRNLGEALRRIREGAAMIRTKG-EAGTG 171
At2g38230 GVDYVDESEVLTLADEDHINKHNFRIFFVCGCRNLGEALRRIREGAAMIRTKG-EAGTG 172
At3g16050 AVDYIDSEIISVADDHFIKHNFRSPFICGCRDTGEALRRIREGAAMIRIQGDLTATG 176
snz3 QVDYIDSEVLTPADWTHIEKHNFKVPFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG 152
snz2 QVDYIDSEVLTPADWTHIEKHNFKVPFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG 152
snz1 EVDYIDSEVLTPADWTHIEKDKFVPFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG 154
* * * * *

At5g10410 NIEAVRHVRVSVNGDIRVLRN---MDDDEVFTFAKKLAAPYDLVMQTKQLGRLPVVFQFAAG 229
At2g38230 NVVEAVRHVRVSVNGAIRLLRS---MDDDEVFTYAKKIAAPYDLVVQTKELGRLPVVFQFAAG 230
At3g16050 NIAETVKNVRSMLGVEVRVLRN---MDDDEVFTFAKKISAPYDLVAGTKMGGRVPVVFQFASG 234
snz3 DVSEAVKHITIKAEIQQYKENLKTESDFAAKATELRVPVDDLKTTLSGKLPVNVFAAG 212
snz2 DVSEAVKHITIKAEIQQYKENLKTESDFAAKATELRVPVDDLKTTLSGKLPVNVFAAG 212
snz1 DVSEAVKHIRRITEIIXACQQ-LKSEDDIAKVAEMRVPVPSLLKDVLEKGLPVPVNVFAAG 213
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At5g10410 GVATPADAALLMQLGCDGVFVSGIFKSGDPARRARAIVQAVTHYSDEPMLVEVSCGLGE 289
At2g38230 GVATPADAALLMQLGCDGVFVSGIFKSGDPVKKRAKAIQVAVTNYRDAVLAEVSCGLGE 290
At3g16050 GITTTPADAALLMQLGCDGVFVSGIFKSGDPDPFKKLRSIVQAVQHYNDPHVLAEMSSGLEN 294
snz3 GVATPADAALLMQLGCEGVFVSGIFKSSDPEKLACAIVEATTHYDNPAKLLQVSSDLGD 272
snz2 GVATPADAALLMQLGCEGVFVSGIFKSSDPEKLACAIVEATTHYDNPAKLLQVSSDLGD 272
snz1 GVATPADAALLMQLGCDGVFVSGIFKSSNPVRLATAVVEATTHYDNPAKLLQVSSDLGE 273
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At5g10410 AMVGINLNDKVERFANRSE----- 309
At2g38230 AMVGLNLD--KVERFASRSE----- 309
At3g16050 AMESLNVGRDRIODFGQGSV----- 314
snz3 LMGGISIQSINEAGGKNGARLSEIGW 298
snz2 LMGGISIQSINEAGGKNGARLSEIGW 298
snz1 LMGGVSIIESHAS--NGVRLSEIGW 297
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(57) Abstract: The present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide and those uses. Particularly, this present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide, a method for inducing plant growth inhibition, a method for screening a compound inducing plant growth inhibition, and composition for inducing plant growth inhibition which comprises the compound obtained by the screening method.

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